Trust and Reciprocity Drive Social Common Goods Contribution Norms

Abstract

In the emergent field of tax psychology, the focus on regulating tax evasion recently shifted towards searching for situational cues that elicit common goals compliance. Trust and reciprocity are argued to steer a socially-favorable environment that supports social tax ethics norms. Experiments, in which 256 participants played an economic trust game followed by a common goods game, found evidence for trust and reciprocity leading to individuals contributing to common goals. The more trust and reciprocity was practiced and experienced, the more common goals were supported – leveraging trust and reciprocity as interesting tax compliance antecedents. The results have widespread implications for governmental-citizen relations. Policy makers and public servants are advised to establish a service-oriented customer atmosphere with citizens breeding trust and reciprocity in order to reach common societal goals.

Keywords: Common goods game, Common goals compliance, Reciprocity, Tax ethics, Trust, Trust game, Tax Psychology

THEORY

Taxation is codified in all major societies and practiced as a hallmark of democracy. Aimed at providing public goods and redistributing assets, taxation improve societal welfare and fairness. Tax compliance is a universal phenomenon derived from cooperation for the sake of improving the social compound. Taxpayers voluntarily decide to what extent to pay or avoid tax that limit the personal freedom. In a social dilemma, individual interests are in conflict with collective goals. From a mathematical and economic perspective, the optimal strategy of rational individuals would be to not cooperate. Short-term the single civilian tax contribution does not make a significant difference in the overall maintenance of public goods – if only a few taxpayers evade taxes, public goods will not disappear or be reduced. But if a considerable number of taxpayers do not contribute to tax over time, common goods are not guaranteed and ultimately everyone will suffer from suboptimal societal conditions (Dawes, 1980; Stroebe & Frey, 1982).

As common as tax compliance is, however, as robust are findings is tax evasion throughout all times, cultures and races. Already Plato wrote about tax flight and the fifteenth-century Palace of Venice had a hole through which people could inform the Republic about tax evaders (Adams, 1993; Tanzi & Shome, 1994). Ancient Egypt enforced tax laws and resistance to pay for public goods plays a role in the collapse of major world empires (Erard, 1997; Kirchler, 2007). Participants need to be forced to cooperate by control mechanisms and sanctioning of defection. Audits and punishment are common to ensure cooperative behavior – but have shown limitations.

In the long history of tax practice, the phenomenon has surprisingly not received much attention in the research literature. First inquiries not only open wide research gaps but also show

difficulties. Citizens are ashamed of tax fraud and undertake efforts to conceal their socially-inacceptable behavior. They are shy to report crimes that governments would fix if being detected (Andreoni, Erard & Feinstein, 1998). Consequently self-reports differ from actually detected tax evasion behavior (Baldry, 1987; Effers, Robben & Hessing, 1991). Problems also emerge from untangling tax evasion from inadvertent non-compliance, taxpayers' memory lapses and calculation errors (Hessing, Effers & Weigl, 1988; Wilson & Sheffrin, 2005). Inadequate knowledge of tax laws and the complexity of tax reporting lower the motivation and ability to correctly recall experiences for tax psychology. Various research methods employed in the investigation of taxation add to vastly diverting results.

Tax behavior research has been investigating political perspectives, focusing on tax legislation and the shadow economy. Defection and social dilemmas are studied by various disciplines including mathematics, economics, sociology and psychology. Classic economic models analyze the impact of tax audits, tax rates and income on tax compliance. The emerging tax ethics field considers tax evasion motives and the criminal prosecution and punishment of fraud. Taxpayers are assumed to make strategic decisions and depict tax reports as the result of rational considerations of financial gains and losses. Classic theories neither capture the relationship between taxpayers and resulting fairness considerations, nor the relation between taxpayers and tax collectors. Models based on classic theories also do not shed light on incentives to raise tax compliance.

Contemporary economic research has focused on costs and risks of tax evasion (Tyler & De Cremer, 2006). Coercive means to enhance tax compliance – such as audits and fines – are argued to crowd out tax morale and ultimately result in greater non-compliance (Feld & Frey, 2002; Hasseldine, 1998). Cialdini (1996) stresses the fact that monitoring not only makes people

feel observed and controlled but also leads to the impression of not being trusted. As a consequence, intrusive audits and severe punishments undermine voluntary cooperation (Frey, 1992).

Andreoni, Erard and Feinstein (1998) recognize the importance of incorporating morals and social dynamics in economic theory on tax behavior as positive drivers of tax compliance to overcome the 'burden of taxes' and associations of losses (Kirchler, 2007). Convincing the public that tax are for the public good appear to require a multidimensional conception of taxes as a dynamic phenomenon (Braithwaite, 2003a).

When analyzing tax behavior, recently behavioral economics insights have gained attention in order to gain an accurate understanding of the social influences on social dilemmas. Behavioral economists widen the lens of incorporating sociological and socio-psychological understandings of tax compliance (Kirchler, 2007). Social dilemmas have been replicated in laboratory settings that capture participants' decisions to cooperate or defect common pools in order to derive theoretical models on tax compliance (Davis & Holt, 1993; Green, Kahneman & Kunreuther, 1994). Experimental analyses of taxpayers' reporting behavior allow conclusions about tax decision making and tax allocation styles in a controlled environment. Most recently, social nudge theories apply behavioral economics insights to change people's tax behavior by studying the impact of the situational setting on tax compliance (Braithwaite & Ahmed, 2005; Eichenberger & Frey, 2002; Frey, 1997; Lewis, 1982; Strümpel, 1966, 1969; Torgler, 2002; Vogel, 1974). From the psychological perspective, individuals are altruistic but human interactions play an unexplored role for tax compliance. Apart from governmental control and sanction mechanisms, the social situation may determine cooperation on tax payments (Hanson, 2012; Poppe, 2005). In social dilemma experiments, participants' cooperation increases if their

behavior is publicly known, if they are allowed to communicate with each other and if mutual sympathy is established (Dawes, 1980; Van Lange, Liebrand, Messick & Wilke, 1992).

The antecedents of social tax ethics norms and situational cues to elicit tax compliance are yet unknown. Social norms as a function of an individuals' perceived expectation that one or more relevant referents would approve of a particular behavior could be drivers of tax morale. On the individual level, norms define internalized standards how to behave. As indicators of the extent to which the individual will be motivated to comply with such beliefs, social norms are potential tax ethics nudges. Internalized norms may determine tax morale (Frey 1997; Mumford, 2001; Schmölders, 1960). Social norms elicit concurring behavior when taxpayers identify with the group to whom the norms are ascribed. If taxpayers believe that non-compliance is a widespread and socially-accepted, then it is more likely that they too will not comply. Taxpayers then internalize the social norms and act accordingly.

Recognition of the importance of societal norms for tax compliance lead the demand for a revision of the relationship between citizens and governmental institutions (Bergmann, 2002; Feld & Frey, 2005; Fjeldstad, 2004; Frey, 2004; Kirchgässer, Feld & Savioz, 1999; Pommerehne & Frey, 1992; Torgler, 2005a, 2005b; Tyler, 2001a, b). International comparisons of tax behavior reveal tax norms being related to different stages of institutional development of the government (Alm, Martinez-Vazquez & Schneider, 2004; Alm & Torgler, 2006; Chan, Troutman & O'Bryan, 2000; Gërxhani, 2004; Schneider & Klinglmair, 2004; Torgler, 2003a). Tax morale has been depicted as a useful barometer for judging how the tax system is represented in citizens' minds. People tend to adhere to a social contract in the relationship with their government. According to this psychological bonding with the community and relation to the government, taxpayers feel an obligation and willingness to comply with tax requirements.

Governmental actions are believed to ensure tax compliance. In a tit-for-tat strategy, taxpayers' compliance may depend on public goods provided by the government as well as procedural and distribute justice. Based on the interaction between tax authorities and taxpayers, tax payers perceive themselves as members of a social group, whose social norms to follow.

Research on tax compliance has focused on personal ethics and subjective perceptions of behavioral habits in taxpayers' reference group. Innovative tax psychology studies refer to social situations breeding tax ethics (Kirchler, 2007). Citizens' approval of tax politics are hypothesized to depend on fairness notions and cooperation between citizens and the community. Reciprocity appears as an interesting yet unexplored moderator of tax ethics. But also social fairness considerations in a tax reference group may breed taxpayer compliance. Individuals who perceive themselves in a disadvantageous tax situation are more likely to evade taxes, whereas an advantageous situation is related to higher compliance (Spicer & Becker, 1980).

The case of voluntary, self-chosen tax ethics and situational influences on social tax compliance norms have surprisingly been neglected in research. Psychological variables – such as trust and fairness for the formation of social norms have been left out. Trust is believed to decrease egoistic utility maximization leveraging trust and reciprocity as interesting social norms building factors (Kirchler, 2007).

The following paper sets out to investigate if trust and reciprocity drive pro-social tax compliance norms. The proposed research will test the effect of trust and reciprocity on the willingness to contribute to public goods – with special attention to the role of future-conscientiousness and social responsibility. Trust and reciprocity are hypothesized to breed social common goods contribution norms. The impact of trust rewarding and trust defecting experiences will also be scrutinized for future-oriented and socially responsible public policy

preferences. Finding trust and reciprocity as drivers of tax compliance could help convince tax payers to pay one's share aside from a costly and fallible cops-and-robbers approach. A 'service-and-client' atmosphere could promote taxpayers as cooperative citizens who are willing to comply if they understand tax laws and perceive their environment as trustworthy and fairly reciprocating. Taxpayers as cooperative citizens would be willing to comply voluntarily following the greater goal to promote taxpayer collaboration and enhance tax morale (Kirchler, Niemirowski & Wearing, 2006).

Adding to heterodox economic theories, insights are gained on the importance of trust and reciprocity for breeding social tax compliance norms. Connecting individual experiences to collective common goal outcomes contributes to behavioral law and economics. Behavioral socio-economic theories are spearheaded by elucidating social forces as the core of collective decision making.

Social norms

Taxpayers' social behavior is determined by social norms – socially shared beliefs how one ought to behave based on informal social sanctions (Fehr, Fischbacher & Gächter, 2002). Social norms are a function of an individual's perceived expectation that one or more relevant referents would approve a particular behavior and the extent to which the individuals will be motivated to comply with such a referent's beliefs (Ajzen, 1991).

While social norms are cultural standards reflected in laws and public policies, Spicer and Lundstedt (1976) found social norms to be a more important factor underlying taxpayers' behavior than governmental sanctions. Taxpayers are motivated by social norms, which influence taxpayers' behavior and tax compliance (Pickhardt & Prinz, 2014; Wenzel, 2005b). Taxpayers who perceive others as behaving according to socially accepted rules and who

communicate with others about appropriate behavior will adopt the socially shared norms and behave in accordance to the collectively shared social norms (Schmölders, 1970b). Personal norms of ethicality correlate with cooperation (Torgler, 2003b; Vogel, 1974).

Social norms' impact is shaped by individuals' attachment to their reference group (Turner, Hogg, Oakes, Reicher & Wetherell, 1987; Turner & Onorato, 1997; Wenzel, 2004). There is a strong effect of social norm salience on tax compliance in situations of high identification with the reference group (Wenzel, 2005). Interaction exerts the perception of social norms making it more likely to comply. Interaction drives appeal to groups and correspondingly decrease personal self-interest and more concern about outcomes for all (Taylor, 2003). The interaction between tax authorities and taxpayers shapes basic assumptions about common goals and strategies.

The government-citizen relation is important as for motivating people to activate ethical incentives to support group policies. When people identify with their group, individual motives are transformed from the personal to the group level. Individuals feel a sense of personal responsibility and obligation to support group decisions and uphold moral values relevant to the group or society. Self-interest of the group melt for collective goals. Citizens are motivated to pay tax when social norms favor cooperation. To encourage identification with group and society and to activate moral motives, mutual trust and reciprocity are hypothesized to drive a spontaneous willing to contribute to social common goods.

Trust

Regarding the relation between tax authorities and taxpayers, an unprecedented approach is to understand tax compliance aversion as an expression of less confidence in the government. While powerful but not trustworthy authorities enforcing compliance through control and

governmental sanctions were argued to breed distrust and individual profit maximization (Frey, 1992), investigating the flipside of the importance and role of trust as a driver of social tax ethicality norms has been neglected.

Trust is a critical factor in understanding the origins of civic compliance. If governmental authorities had to continually explain and justify their actions, the governmental ability to effectively manage public affairs would vanish. Tax authorities' orientation towards taxpayers and their interaction styles create a climate which determines taxpayers' trust in authorities resulting in cooperation and voluntary compliance. Without such a climate, taxpayers dissociate from the tax authorities and their goals. Trust is inversely related to resistance and depends mainly on perceptions of governmental treatment (Murphy, 2003).

Torgler (2003b) stressed the importance of trust in the political and legal system to enhance tax compliance (Kramer & Tyler, 1996; Tyler, 2001a). Citizens have been found to claim that tax authorities fail to communicate respect and trust to the taxpayer (Kirchler, 2007). Torgler (2003c) analyzed Canadian data from the World Values Survey and found evidence that trust in government has a systematic positive influence on tax morale (Schwartz & Orleans, 1967). Based on these descriptive results, citizens' trust in authorities is argued to determine voluntarily tax compliance apart from conventional tax compliance enforcement.

Trust in governmental institutions may build social norms that positively affect tax morale. Trusting citizens may be more willing and compliant to contribute to common goods. In a history of theoretical and descriptive enquiries of the relation of trust and tax compliance, an experimental investigation on the role of trust and reciprocity to enhance common goods compliance on tax allocation preferences is outstanding. After a line of descriptive and cross-

cultural investigations on the role of trust for tax ethics, research could investigate how trust shapes tax compliance as an antecedent of tax ethics norms.

Reciprocity

Attitudes toward the government based on experience are believed to shape social tax ethics (Kirchler, 2007). Respectful, polite and dignified treatment of taxpayers was found to enhance voluntary compliance (Kirchler, 2007). If the societal climate is friendly and taxpayers trust authorities, compliance occurs (Bergman, 2002; Feld & Frey, 2005; Frey, 2003). If taxpayers agree with the government activities and fiscal policies, taxpayers are cooperative.

Given the importance of a favorable social environment to develop social tax ethics norms, an investigation of the concrete antecedents of tax morality and the relation of social interactions and tax compliance is demanded. In an innovative attempt, tax compliance could be seen as a product of favorable social experiences with the community and the government. Reciprocity may enhance a sense of moral obligation to be honest and strengthen social norms' compliance (Gintis, Bowles, Boyd & Fehr, 2003).

Efficient performance of the state and tax authorities also depends on the individuals' feelings of obligation towards the community (Kramer, 1999). Tax morale and civic duty aggregate citizens' beliefs and evaluations of other citizens and their behavior. A mutual understanding of taxpayers raises their willingness to cooperate (Cialdini, 1993).

Fairness

A climate of cooperation is likely if government policy is accepted and trusted, personal and social norms are favorable to cooperation and tax burden and tax procedures are perceived as fair. When investigating tax systems, fairness and the relative treatment in comparison to others

are the most frequently mentioned topics (Antonides & Robben, 1995; Braithwaite, 2003b; Brooks & Doob, 1990; Jackson & Milliron, 1986; Mason & Calvin, 1978; Thorndike & Ventry, 2002). Extensions of neoclassical economic assumptions capture the choice of a taxpayer to evade taxes depending upon the perceived fairness of the tax system (Kirchler, 2007). Willingness to comply with the laws is determined by the perceived fairness. Citizens are motivated to pay tax when taxes are perceived to be fair and just (Schmölders, 1960). Exchange equity considers fair distributions of the results of exchanges between partners within the social reference group and institutional conditions (Adams, 1965). If taxpayers are treated as equal partners, they are more cooperative. Distribute justice is measured by the individual horizontal fairness of distributed resources and burdens between taxpayers of comparable income groups.

Fairness depends on the object of comparison and taxpayers' identification with a social reference group. Fairness judgments are not stable but depend on the object of comparison and on taxpayers' identification with a social group or category to which justice refers (Taylor, 2003). Taxpayers weight their exchange equity with the government and equity of one's contributions relative to the contributions of other taxpayers as a framework for fairness (Wenzel, 2003). If an individual's perceived tax burden is heavier than that of comparable others or if taxpayers perceive the exchange with the government as unjust, tax evasion increases.

Justice concerns seem to have an especially strong impact if taxpayers identify with their reference group and national government (Wenzel, 2002). Procedural fairness plays a key role in shaping the legitimacy that citizens grant to government authority. On the individual level, procedural justice refers to the quality of treatment in interactions between taxpayers and authorities (Frey, 2003; Torgler, 2005a). According to social categorization theory and the group value model (Lind & Tylor, 1988), taxpayers are more concerned about fairness and less about

personal outcomes and egoistic advantages when they identify strongly with the group to which procedures and distributions apply.

Equity and fair treatment are believed to build trust and lead to the development of a psychological contract and compliance due to binding social norms. Fairness perceptions are related to trust and trustworthiness derived from dignified and respectful treatment (Tyler & Lind, 1992). When authorities are perceived to behave fairly and respectful, greater compliance results (Taylor, 2001). Taxpayers seek procedural justice in terms of neutrality, trustworthiness and reciprocity. At the individual level, fair treatment of individual taxpayers and the culture of interaction based on reciprocity are relevant aspects of fairness and building trust. A relation of voluntary trust and reciprocity may lead to voluntary cooperation. Preliminary findings on fairness are inconsistent as heterogeneous aspects of fairness have been investigated and the operationalization varied. Social exchange is a prerequisite of peoples' judgments of fairness (Güth & Sausgruber, 2004).

HYPOTHESES

The empirical part sets out to investigate trust and reciprocity forming social tax compliance norms. The proposed research will test the effect of trust and reciprocity on the willingness to contribute to public goods – with special attention to the role of future-conscientiousness and social responsibility. Trust and reciprocity are hypothesized to breed social common goods contribution norms. The impact of trust rewarding and trust defecting experiences will also be scrutinized for future-oriented and socially responsible public policy preferences.

Methodologically, experiments will employ an economic trust game followed by an economic public good game and a public policy ranking task. Previous economic games'

experiments have mostly examined situations in which subjects cannot track the identity of other players. These settings, however, do not model the full realm of collective decision making. Playing two economic games concurrently with the same subjects will take out the anonymity of economic games and increase the external validity of the results. Innovatively individuals' history will be taken into consideration as a basis for collective resource allocations. By modeling repeated interactions, past experiences will explain future consequences.

The prospective results will elucidate the role of trust on common good contributions as a prerequisite of institutional policy and government-citizen interaction recommendations to find ways to improve common goals compliance in society.

METHOD

An experiment tested the relation of trust and reciprocity on common goods allocation preferences in order to draw conclusions about the effect of trust and reciprocity on the formation of social public goods contribution norms. Methodologically, experimental sessions employed an economic trust game followed by an economic public good game. The experiment also related different trust, reciprocity and common goods allocation preferences to future-oriented or socially responsible public policy choices.

Trust is typically measured in an economic trust game, in which one person can trust by giving an amount of money to another, who can in reverse return payments or defect by keeping the received payment. Money transfers are usually incentivized by doubled pay outs for the recipients, who can choose to respond by returning money. While standard trust games capture the degree of trust in humans, the typical set-up of these economic studies does not shed light on the future consequences of the trusting, rewarding or defecting experience of the players.

The public or common good game is the classic laboratory setting for studying collective action problems. In this game each participant chooses how much to contribute to a common pool that equally returns benefits to all participants. The ideal outcome would occur if everybody contributes the maximum amount, but self-interests suggest saving everything for oneself without any public contributions.

An inbetween-subjects design, in which players persisted from game 1 (trust game) to game 2 (common good game) captured the impact of differing trust and reciprocity experiences – of rewarding and defecting outcomes – on subsequent common goods contributions.

Experiments were staged in a North American university Decision Science Laboratory. Subjects were recruited from a standard recruitment pool. Attendance and completion was remunerated by a basic flat rate of 5 USD for showing up as well as a salary dependent on the trust allocations and the final common goods pool (see instructions in the appendix). Based on the choices made by the participant and a randomly selected partner in the experiment, all participants received up to USD 23 in addition to the show-up amount. All funds were paid in cash immediately after the experiment.

The experiments were employed by personal computers supported by the software z-tree and Qualtrics. After instructions informing about the experiment, an informed consent was presented to be agreed upon prior to participating in the actual experiment. The experiment was introduced as being about choices and decision making. All participants were randomly coupled with another person, with whom they would interact during the entire rest of the experiment. Each person of the duo was assigned a number that represented their identity throughout the experiment. During the laboratory experiment, participants interacted anonymously via computer screens without speaking with each other. All participants played a trust game followed by a

common good game conducted by the same participants in order to capture interactions. All subjects had a trusting experience, but naturally some were rewarded for trusting, while others experienced defection of their trust. In the subsequent common good game, they could pay back their experiences and reward, be agnostic or defect the collective pool contributions.

In the first game, the trust game, both players of the duo received 10 experimental currency units (ECU) that they were told to be able to convert into real money by the exchange rate of 2 ECU=1USD in the end of the experiment. Player 1 had the possibility to transfer none, some or all of the 10 ECU at their choice to player 2. The amount that was chosen to be sent was displayed on the screen of player 2. At player 2's screen the amount was doubled. For instance, if player 1 sent 5 ECU, player 2 received 5 ECU*2=10 ECU. Player 2 then had the possibility to send none, some or all of their money back to player 1.

The amount that player 2 sent back was displayed on player 1's screen. The amount player 2 sent was not doubled. For instance, if player 2 sent 5 ECU, player 1 received 5 ECU. Then the game was over. The payoff in this game equaled the initial 10 ECU minus the amount player 1 gave player 2 plus the amount player 1 received from player 2. For instance, if player 1 sent 5 ECU to player 2 and player 2 sent 7 ECU back, then the earning were 10 ECU – 5 ECU + 7 ECU = 12 ECU. 12 ECU correspond to 6 USD, which would be player 1's earning. Player 2's payoffs equaled the initial 10 ECU plus the amount received from player 1 doubled minus the amount that player 2 sent to player 1. For instance, if player 1 sent 6 ECU to player 2 and player 2 sent 4 ECU back, then the earnings of player 2 were 10 ECU + 12 ECU – 4 ECU = 18 ECU. 18 ECU corresponded to 9 USD, which would be the earnings of player 2 in this case. The first part of the experiment ended after the decision of player 2. This game was played once.

In game 2 the same player duo that played game 1 was part of game 2. No player was informed about the actual identity of the other. As the second game, a common goods game was played. Both players received 10 ECU from which they had to decide how much to keep for themselves or contribute to a common pool. All participants were informed that the other player also received 10 ECU from which she or he had to decide how much to keep for her/himself or contribute to the same common pool. All contributions of both players of this game were added up in the common pool, which was factored by 1.6 and then split evenly among both players.

Each player got the same share from the second game. Concurrently to the earnings from the common pool, the players also received the units they chose not to contribute. The remuneration depended on the final common goods pool in the following way: 10 ECU minus half the individual contributions to the common pool plus 1.6 multiplied by the sum of all contributions divided by two (see formula in the appendix). For instance, if player 1 decided to contribute 8 ECU and player 2 contributed 7 ECU, the pool would comprise of 8 ECU + 7 ECU = 15 ECU multiplied by 1.6 = 24 ECU. Each player would receive ½ of the common goods pool thus 24 ECU/2 = 6 USD plus the amount not contributed to the pool from the initial 10 ECU. The game was then over.

At different stages of the experiment, two sets of public policies that were rated based on the level of future-orientation and social responsibility represented were presented to the players supported by Qualtrics. Each participant saw two ranking tasks. The ranking task 1 featured 32 public policies in the domain culture, economics, education, foreign aid and infrastructure. The ranking task 2 comprised of 32 public policies on environmental sustainability.

The public policies were derived from a public policy spectrum that was based on contemporary public policy literature for academics and practitioners comprising of fictitious 36

public policies. All public policies were rated by 120 raters recruited online and at two European universities. During May 2011, an email was sent to international public policy specialists requesting help with rating public policies as a pre-test. Shortly thereafter, a survey was staged at laboratory computer rooms of a European university at the university laboratory computers. University students were approached on campus to participate in a survey to rate public policies on the two dimensions 'time of policy impact' and 'social responsibility.' The electronic survey comprised of an excel-spreadsheet that was presented either by email as attachment or on personal computers in front of the subjects at the European university computer rooms. The spreadsheet asked participants to 'Please rate each public policy initiative by the time of the main impact of the policy unfolding on a scale ranging from -5 (The most immediate impact) to +5 (The most distant impact).' A concept definition described 'Distant' referring to temporal distance. The questionnaire stated 'Per policy mark only one respective box with x like in the example in the following' and an example was given. Scale options ranged from 'the most immediate impact,' 'very soon impact,' 'quite soon impact,' 'soon impact,' 'somewhat soon impact,' 'just a bit distant impact,' 'somewhat distant impact,' 'distant impact,' 'quite distant impact,' 'very distant impact,' and 'the most distant impact.'

Regarding individual profit maximization versus social responsibility, respondents were asked to 'Please rate each public policy initiative on a scale ranging from -5 = The most individual profit maximizing to +5 = The most socially responsible.' Scale options ranged from the most individual profit maximizing,' 'very much individual profit maximizing, 'much individual profit maximizing,' 'individual profit maximizing,' 'somewhat individual profit maximizing,' 'evenly individual profit maximizing and socially responsible,' 'somewhat socially responsible,' 'socially responsible,' 'much socially responsible,' 'very much socially

responsible,' and 'the most socially responsible.' The concepts were defined as 'Individual profit maximizing' serves egoistic self-interests. 'Socially responsible' refers to social conscientiousness about others' needs serving society at large.' The questionnaire stated 'Per policy mark only one respective box with x like in the example in the following' and an example was given.

A total of 120 individuals derived from the online survey and recruited at two European universities rated the presented policies on a balanced 11-point scale ranging from -5 to +5 on the two dimension 'time of policy impact' and 'social responsibility.' The policy rating led to an average evaluation of the 64 policies on the two dimensions 'time of policy impact' and 'egoism vs. social responsibility' expressed in means and standard deviation for each policy. The policies were selected based on the content represented as well as the polarity of representing a bundle comprising of one policy with impact now and one policy with impact later per dimension. Table 1 summarizes the 32 hypothetical policies chosen for ranking task 1 with the means and standard deviations retrieved from the ratings of the individual policies on the amalgamated individual perception of the 'time of the policy impact' as well as the 'social responsibility.'

INSERT TABLE 1 ABOUT HERE

Table 2 summarizes the 32 hypothetical policies chosen for ranking task 2 with the means and standard deviations retrieved from the ratings of the individual policies on the amalgamated individual perception of the 'time of the policy impact' as well as the 'social responsibility.'

INSERT TABLE 2 ABOUT HERE

All participants were asked to rank order the public policies by importance (see appendix). Importance was defined as willingness to contribute to this cause. The participants were asked to place the – in their opinion – most important public policy initiative on top followed by the next, a bit less important public policy initiative and so on. On the bottom there should be the – in their opinion – least important public policy initiative.

In total, each participant ranked 32 of the policies in task 1 and 32 of the public policies in task 2. Task 1 and task 2 were presented to the participants at different stages of the experiment (see appendix). Of the 246 valid participant answers on ranking task 1, 33 ranked task 1 public policies prior to task 2 and both games, 23 ranked task 1 past task 2 and prior to both games, 24 ranked task 1 past trust game player 1 first move but prior to player 2 receiving player 1 allocations and the subsequent trust and common goods games, 24 players ranked task 1 past trust game player 2 receiving player 1 allocations but prior to trust game 2nd move of player 2 playing back to player 1 and the subsequent common goods game, 24 players ranked task 1 past the trust game 2nd move player 2 playing back but prior to trust game player 1 receiving player 2 allocations and the subsequent common goods game, 25 players ranked task 1 past the trust game player 1 receiving player 2 allocations but prior to the common goods game, 50 players ranked task 1 after the trust game and the common goods game allocations but prior to the common goods game allocation outcome reporting and 43 players ranked task 1 after the entire trust and common goods games were played.

Of the 244 valid participant answers on ranking task 2, 33 ranked task 2 public policies past task 1 and prior to both games, 24 ranked task 2 prior to task 1 and both games, 23 ranked task 2 past trust game player 1 first move but prior to player 2 receiving player 1 allocations and the subsequent trust and common goods games, 24 players ranked task 2 past trust game player 2

receiving player 1 allocations but prior to trust game 2nd move of player 2 playing back to player 1 and the subsequent common goods game, 24 players ranked task 2 past the trust game 2nd move player 2 playing back but prior to trust game player 1 receiving player 2 allocations and the subsequent common goods game, 25 players ranked task 2 past the trust game player 1 receiving player 2 allocations but prior to the common goods game, 47 players ranked task 2 after the trust game and the common goods game allocations but prior to the common goods game allocation outcome reporting and 44 players ranked task 2 after the entire trust and common goods games were played.

RESULTS AND DISCUSSION

The results provide insights if trust and reciprocity elicit future common goals compliance as well as unravel the effect of rewarded and defected trust experiences on common good allocations. The average contribution to the common good pool was compared in order to measure the impact of differing trust experiences and reciprocity levels on common goods game contribution preferences.

In 256 players, first player's trust is significantly positively related to overall common goods contributions ($r_{Pearson}$=.370, p<.000). The stronger player 1 initiated trust, the more likely the player duo was to contribute to common goals.

In 128 player 1 we find that first player's trust – measured by player 1's first offer in the trust game – is significantly positively related to player 1 common goods contributions ($r_{Pearson}$=.332, p<.000). The more player 1 trusted, the more likely they were to contribute to common goals.

The reciprocity of 99 player 2 – based on player 2 return of player 1 first move contributions in the trust game – is significantly positively related to 99 player 2 common goods contributions ($r_{Pearson}$=.312, p<.002). The more reciprocity is practiced, the stronger are common goods allocations.

The trust experience of 128 player 2 – based on player 1's first move contribution in the trust game – is significantly positively related to 128 player 2 common goods contributions ($r_{Pearson}$=.332, p<.000). The stronger people experienced trust in a generous move of a social environment, the more likely they were to contribute to common goals.

The experienced reciprocity of 99 player 1 is significantly positively related to player 1 common goods contributions ($r_{Pearson}$=.312, p<.002). The more reciprocity is experienced, the stronger are common goods allocations.

Regarding the ranking tasks asking experiment participants to rank order policies with differing time of policy impact and social responsibility levels, we find in 75 participants that common goods allocations elicit a more future-oriented public policy choice than reciprocity experiences in ranking task 1 (t=-1.770, df=73, p<.041) and in 72 participants ranking task 2 (t=-1.996, df=70, p<.025) for all players. For 37 player 2 common goods allocations elicit a more future-oriented public policy choice than reciprocity experiences in ranking task 1 (t=-1.727, df=35, p<.047) and in 35 participants ranking task 2 (t=-2.342, df=33, p<.013) for all players.

Reciprocity experiences of 25 participants lead to more socially responsible choices in ranking task 1than the baseline measurement prior to any economic games of 56 participants (t=-1.849, df=79, p<.034). Reciprocity experiences of 25 participants lead to more socially responsible choices in ranking task 1 than the trust expressed in the trust game first move of player 1 (t=-1.963, df=47, p<.028). Reciprocity experiences of 25 participants lead to more

socially responsible choices in ranking task 1 than the reciprocity expressed in the trust game second move of player 2 (t=-1.640, df=47, p<.054) – especially in 12 player 2 (t=-2.084, df=22, p<.025).

In ranking task 1 we find that general trust practiced by player 1 first move in the trust game elicits stronger preference for future oriented public policy choices than practiced reciprocity in trust game player 2 second move playing back to player 1 in 48 participants (t=1.849, df=46, p<.036) and in particular in 12 player 1(t=2.138, df=22, p<.022).

Ranking task 2 outlines that experienced trust by player 2 receiving initial payment from player 1 elicits a stronger preference for future oriented public policies than the baseline measurement in 81 participants (t=-3.983, df=79, p<.000) – holding for 41 player 1 (t=-2.450, df=39, p<.010) and 40 player 2 (t=-3.104, df=38, p<.017).

In ranking task 2 we find that experienced trust by player 2 receiving initial payment from player 1 elicits a stronger preference for future oriented public policies than experienced reciprocity when player 1 receives player 2 allocations in 49 participants (t=3.135, df=47, p<.002) – holding for 25 player 2 (t=2.941, df=23, p<.004). Experienced trust also raises future oriented public policy choices in 71 participants compared to common goods allocations (t=2.351, df=69, p<.011) and 68 participants compared to common goods game outcome reporting (t=4.159, df=66, p<.000). The effect of experienced trust raising future oriented public policy preferences holds for 25 participants compared to trust game player 1 receiving the second player allocation (t=2.941, df=23, p<.004) and 33 participants trusting compared to common goods game outcome reporting (t=2.377, df=31, p<.012).

Ranking task 2 also outlines reciprocity by trust game player 2 second move playing back implying a stronger preference for future oriented public policies than common goods allocations

in 68 participants ($t=2.574$, $df=66$, $p<.006$) – and especially player 1 as found in 35 players ($t=3.369$, $df=33$, $p<.001$).

Ranking task 2 shows in 92 participants common goods allocations elicit more future oriented public policy choices than common goods game outcome reporting ($t=2.650$, $df=89$, $p<.005$) – and especially player 1 as found in 48 players ($t=3.039$, $df=46$, $p<.002$).

DISCUSSION

Tax evasion has negative effects on the national budget and suboptimal consequences for the general populace. The post-2008/09 world financial crisis era being characterized by governmental bailouts leverages tax compliance into a pressing issue of concern. In times of overindebtedness tax fraud bearing unfavorable societal costs has reached the need for taxpayers' compliance to unprecedented necessity.

Understanding the socio-dynamics of tax ethicality follows the greater goal of finding strategies how to steer a pro-social society. Deriving information on circumstances under which decision makers are likely to deviate from rational profit maximization in common goods allocations helps modeling individual tax ethics. Elucidating the role of social forces in economic tax allocation decisions opens ways to steer civic duty based on a cooperative relationship within society. Finding tax ethics nudges provides strategies to elicit taxpayers' voluntary compliance. Identifying tax ethics triggers is aimed at modeling day-to-day societal decision making. Based on the findings, institutional technocrats are enabled to design social contexts that automatically raise social conscientiousness and help implementing institutional models that motivate citizens to contribute to common goals.

The administration of the tax system is monetarily costly and raise questions how to control the controllers and make taxpayers follow the law. If taxpayers trust the government and

tax authorities the tax climate is likely favorable. Taxpayers base their trust on the experiences with tax authorities. Outlining the importance of trust and fairness for collective decision making is an innovative attempt to help policy makers improve tax ethicality in the absence of legal enforcement and governmental control (Ostrom, 2009). Determining trust and reciprocity as the basis of socially favorable tax allocation outcomes helps governmental officials to reach common goals and establish justice. Overall, outlining the role of trust and reciprocity as means to implement tax compliance fosters the greater goal of ensuring a sustainable and fair society.

The findings of an experiment outline trust and reciprocity experiences driving common goods allocation preferences. In order to derive information on concrete drivers of the mechanism, future oriented and socially responsible decision making was also recorded. The results over two ranking tasks vary leading to the conclusion that common goods allocation preferences may be determined by the interplay of trust and reciprocity. Although we have no clear picture of the interplay of trust, reciprocity and fairness on social tax ethics norms, unraveling ethicality triggers in trust and reciprocity breeding social tax compliance norms in general holds implications for institutional market communication and governmental information campaigns. Connecting trust to common goals compliance holds recommendations for policy technocrats and political decision makers to help citizens adopt societally conscientious solutions. The presented relation of trust, fairness and reciprocity driving social common goods contribution norms offers practical recommendations for tax authorities.

Finding evidence for the importance of the government-citizen relationship for tax compliance implies that tax authorities are advised to treat taxpayers respectfully. Rather than responding to tax non-compliance with intrusive audits and severe punishment, supportive communication and collective interaction inspiring trust and reciprocity promise to encourage

tax compliance. Replacing hunters-cops-and-robbers strategies featuring control and sanctions for developing trust and reciprocity in a service-oriented tax ethics approach will help foster tax compliance within future societies.

New cultures of customer relations orientation can create a cooperative tax climate. A cooperative contractual relationship and psychological contract apart from control and punishment should feature respectful client-oriented interactions in order to build trust and improve fiscal conscientiousness (Kirchler, 2007). Tax authorities are advised to consider taxpayers as customers. A new culture of customer relationship orientation appears more promising in enhancing cooperation and voluntary compliance without governmental oversight. In a service and client approach, taxpayers and tax authorities should create a climate of mutual trust and reciprocity based on clear and understandable regulations, transparency of procedures as well as respect and politeness for citizens. Taxpayers are more likely to report honestly if they feel that they are being treated courteously by the tax agency. If tax authorities and officers treat taxpayers equally, in a respectful and responsible way, trust in the institution and cooperation increase. Tax authorities should also communicate to enhance a feeling of civic duty. Community responsiveness and citizen communication will raise public good contribution norms as the landmark of national stability and societal wealth.

Regarding future directions, cooperative strategies of self-regulation and education will help gaining tax compliance. Trainings of tax officers and organizational improvement to offer effective advice and problem resolution will foster public relations resulting in enhanced tax compliance. Tax education and support of tax agents as clients will aid taxpayers to understand the necessity of contributing to common goals. Educating tax payers to be cooperative citizens and service client atmospheres will lead to taxpayers' voluntarily compliance. Trust and

reciprocity could also be enabled through positive rewards and raising awareness for social obligations. Fostering relations of trust and reciprocity will establish a psychological contract between governmental officials and citizens. Tax contributions practicing in atmosphere of mutual trust and reciprocity will breed a positive tax morale and voluntary compliance (Feld & Frey, 2002; Frey, 2003; Tyler, 1990). Avenues for future research may consider procedural fairness as additional driver of tax responsibility. Personal identification with friends, occupational groups or the nation could also be investigated as tax compliance moderators.

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Appendix

Appendix 0-1: Sample instructions

Instructions:

Thank you for participating in the following study. All your provided information will always be processed and presented in anonymous and aggregated form.

Please listen to me carefully when I read the following information concerning this study.

The purpose of the research is to examine individual and public choices.

The time required for participation is approximately 30 minutes.

There are no anticipated risks associated with participating in this study.

Your participation in this study is confidential and your individual identity will never be directly related to the collected data.

Your participation in this study is completely voluntary, and you may ask questions about it and/or withdraw at any time without penalty. There is no penalty for not participating.

If you have questions about this research, please contact me by email – information you will find in the consent form presented to you on a sheet of paper in front of you.

By signing the informed consent, you will acknowledge that the nature and purpose of this research have been satisfactorily explained to you, and that you agree to become a participant in the study as described by the consent form. Please be informed that you are always free to discontinue participation at any time and if so chosen your withdrawal from the study will remain without any penalty and that the investigator will gladly answer any questions that arise during the course of the research.

You may now read the consent form in front of you.

After the consent form collection and study participant number hand-out.

You may now start the experiment by reading the text on the computer screen in front of you and deciding into two games and two policy choice tasks.

When you are asked to fill in your participation number, please use the number that was given to you on a sheet of paper when the consent form was collected.

Throughout the entire experiment, please let me know if any questions arise.

Material

Table 1 holds the hypothetical 32 public policies of ranking task 1 rated as well as the means and standard deviations of the ratings on the perception of the 'time of the policy impact' as well as 'social responsibility.'

	Time of policy impact		Social responsibility	
Public Policies Ranking Task 1	Mean_TP	SD_TP	Mean_SR	SD_SR
Addiction recovery	-1.13793103	2.109126051	1.482758621	2.254242488
Anti-crime initiatives	-0.96551724	2.372684056	0.034482759	2.266446913
Child health care	-1.34482759	2.424249188	1.413793103	2.760351469
Child support	-1.82758621	2.314835979	0.75862069	3.183289703
Consumer protection food control	-2.10344828	2.211980367	1.103448276	2.715642216
Cultural heritage conservation for future generations	2.206896552	2.307108867	2.379310345	2.291664054
Culture, arts and sports entertainment	-2	2.243155374	-0.172413793	2.780267084
Disability integration	-0.82758621	2.722178615	1.965517241	2.7835725
Economic market stimulus	-0.31034483	2.749458821	0.620689655	2.396631462
Extracurricular youth education	-0.44827586	2.617351543	1.310344828	2.598850321
First-aid medical emergency assistance	-3.34482759	2.168497395	0.586206897	3.024991688
Foreign aid	0.75862069	2.543796272	2.689655172	1.940494071
Foreign aid child health support	0.655172414	2.681259674	2.655172414	2.299675139
Future basic research and development	2.310344828	1.812289032	1.344827586	2.8180453
Future global governance contribution	2.551724138	2.344643789	2.034482759	2.485425497
Future international development goals contribution	2.551724138	2.23133054	2.310344828	2.473073382
Future international public private partnership set-up	1.413793103	2.588895701	0.655172414	2.608719747
Future space exploration	3.137931034	2.355813564	1.034482759	2.86476815
Immediate public transportation repair	-2.82758621	2.308255256	0.344827586	2.617360257
Infrastructure development	-0.34482759	3.033324612	0.172413793	2.47864442
International organizations' future goals contribution	2.344827586	2.658718313	2.344827586	2.273283109
Long-term foreign aid remittances	2.206896552	2.513779688	2	2.052872552
Long-term monetary policy	2.310344828	2.233404405	0.931034483	2.523680946
Long-term public foreign debt reduction	2.310344828	2.362347949	1.275862069	2.528231402
Low-income support	-2.24137931	2.868133622	1.517241379	2.687561814
Micro-credit for poverty reduction	0	2.968975381	1.413793103	2.525502112
Minority empowerment	-0.5862069	2.871820763	2.344827586	2.476556749
Refugee youth protection	-1.5862069	2.641748659	2.379310345	2.451600462
Retirement benefits	-0.27586207	2.942122475	-0.206896552	2.881570453
Social equality enhancing education reform	0.310344828	2.582757232	1.75862069	2.8180453
Unemployment payment	-2.75862069	2.429971585	0.827586207	2.746784954
Youth entertainment	-2.10344828	2.310260069	-0.517241379	2.501723544

Table 2 holds the hypothetical 32 public policies of ranking task 2 rated as well as the means and standard deviations of the ratings on the perception of the 'time of the policy impact' as well as 'social responsibility.'

	Time of policy impact		Social responsibility	
Public Policies Ranking Task 2	Mean_TP	SD_TP	Mean_SR	SD_SR
Access to clean, safe drinking water	-2.34065934	2.84209924	0.93956044	3.614657787
Acid rain reduction	-0.26373626	2.847431328	1.197802198	2.474176766
Air quality improvement and noise control	-1.45054945	2.586436771	0.434065934	2.492532258
Avert natural resources lock-ins for next generation	0.351648352	2.487836346	1.785714286	2.516769156
Child environmental health and safety risks protection	-1.62637363	2.685964969	1.461538462	2.973583235
Clean energy for next generation	0.472527473	2.848892766	1.747252747	2.730866393
Climate change aversion for a sustainable mankind	0.604395604	2.874508046	1.697802198	2.647723468
Conservation of natural resources for next generation	0.252747253	2.83462187	1.862637363	2.966552564
Current toxic substances, chemicals and pesticides control	-1.64835165	2.302904858	0.527472527	2.840224578
Ecosystem protection for future generations	0.57142857	2.831675495	2.225274725	2.817863391
Emissions outsourcing	-0.82417582	2.641017695	-0.032967033	3.015865013
Endangered species, wildlife and marine offspring protection	-0.85714286	2.575598545	1.796703297	2.773864154
Environmental justice relief of environmental protection burden for minority and low-income population	-0.1978022	2.876144497	1.39010989	2.413149202
Foreign natural disaster recovery	-0.49450549	3.098567991	1.615384615	2.714025539
Green products	-1.87912088	2.646716315	-0.17032967	2.815647601
Green recreational areas cleaning	-1.57142857	2.835942839	0.434065934	2.784212896
Habitat conservation by waste management	-1.40659341	2.431177227	0.93956044	2.397745534
Immediate energy supply	-1.65934066	2.361646644	-0.016483516	2.95324046
Intergenerational equity ensured by future environmental global governance	0.78021978	2.549640812	1.637362637	2.219857894
International agreement on nuclear waste long-term storage	0.395604396	3.146376729	1.384615385	2.760748918
Invest in clean automotive technology enhancement	-1.04395604	2.657740637	0.637362637	2.664651253
Long-term forecasts of pollution impact on the ecosystem	0.307692308	2.886471208	1.697802198	2.442538662
Long-term ozone layer protection	1.208791209	2.872370228	2.027472527	2.690892703
Long-term sustainable energy supply	0.175824176	2.973234836	1.510989011	2.916407628
Long-term toxic chemicals and hazardous substances export	0.340659341	2.723848529	0.28021978	3.016959547
Nuclear storage maintenance	0.505494505	3.010261269	0.494505495	2.836520121
Oil spill emergency cleanup	-1.72527473	2.846449144	1.461538462	2.554115164
Rain forest protection	-0.79120879	2.911426539	1.983516484	2.610290054
Reduce next generation's environmental protection burden	0.615384615	2.54654548	2.10989011	2.504826801
Secure energy supply by fossil fuels imports	-0.65934066	2.535095842	0.252747253	3.010496267
Socially responsible investment in alternative energy	-1.03296703	2.873057022	1.362637363	2.881999628
Sustainable infrastructure development	-0.84615385	2.572809906	0.912087912	2.734139522

Game 1:

Thank you for participating in this experiment. All your information given will always be presented in anonymous and aggregated form.

Please read the following instructions carefully. Please do not talk with anyone during the experiment. If you have any questions, do not hesitate to call for us by raising your hand. Aside from this, no communication is allowed during the experiment.

Everyone will receive a fixed amount of USD 5 for participating in the experiment. In addition, you will be able to earn more money in the experiment. Based on the choices made by you and another person, you will receive up to USD 23 in addition to the show-up amount. Everything will be paid to you in cash immediately after the experiment.

The following instruction explains the experiment.

This experiment is about choices and decision making. You were randomly assigned to another person whom you will never meet. You will be interacting with the same person for the entire rest of the experiment. Each person of your duo will be assigned a number that represents his/her identity throughout this experiment.

Player 1:

You have been randomly selected as player 1 and matched with another person in the room. Another participant of the experiment has been randomly assigned to you. She or he takes the role of player 2. Neither of you will ever know the identity of the other.

Both you and your counterpart receive 10 experimental currency units (ECU). After the experiment you will be able to convert all ECU gained into real money by the exchange rate of 2 ECU=1 USD.

You as player 1 have the possibility to transfer none, some or all of your 10 ECU at your choice to player 2. The amount that you choose to send will be displayed on the screen of player 2. At player 2's screen the amount you sent will be doubled. For instance, if you send 5 ECU, player 2 receives 5 ECU* 2 = 10 ECU. Player 2 then has the possibility to send none, some or all of this money back to you.

The amount that player 2 sends back will be displayed on your screen. The amount player 2 sends will not be doubled. For instance, if player 2 sends 5 ECU, you receive 5 ECU. Then this game is over. Your payoff in this game equals your initial 10 ECU minus the amount you give player 2 plus the amount you receive from player 2. For instance, if you send 5 ECU to player 2 and player 2 sends you 7 ECU back, then your earnings are 10 ECU – 5 ECU + 7 ECU = 12 ECU. 12 ECU correspond to 6 USD, which will be your earning. The first part of the experiment ends after the decision of player 2. This game is played once.

Please make the allocation choice

Please report outcome of game 1

Player 2:

You have been randomly selected as player 2 and matched with another person in the room. Another participant of the experiment has been randomly assigned to you. She or he takes the role of player 1. Neither of you will ever know the identity of the other.

Both you and your counterpart receive 10 experimental currency units (ECU). After the experiment you will be able to convert ECU gained into real money by the exchange rate of 2 ECU=1 USD.

Player 1 has the opportunity to transfer none, some or all of his/her 10 ECU to you. The amount that player 1 may send will be displayed on your screen. At your screen the amount you received will be doubled. For instance, if player 1 sent you 5 ECU, you will see you receive 5 ECU * 2 = 10 ECU.

Please report player 1 allocation to player 2

Please report player 1 allocation to player 2 again

You as player 2 have the possibility to transfer none, some or all of this money to player 1 at your choice. The amount that you send will be displayed on player 1's screen. At player 1 the amount you sent will not be doubled. For instance, if you send 5 ECU, player 1 receives 5 ECU. Then this game is over. Your payoff for this game equals your initial 10 ECU plus the amount you receive from player 1 doubled minus the amount you sent to player 1. For instance, if player 1 sent 6 ECU to you and you send 4 ECU back, then your earnings are 10 ECU + 12 ECU - 4 ECU = 18 ECU. 18 ECU correspond to 9 USD, which will be your earning. The first part of the experiment ends after the decision of player 2. This game is played once.

Please make allocation choice

Please report outcome of game 1

Game 2:

The same player that you just played with will be part of game 2. Neither of you will ever know the identity of the other.

In the following game you receive 10 ECU from which you must decide how much you keep for yourself or contribute to a common pool. The other player also receives 10 ECU from which she or he must decide how much she or he keeps for her/himself or she/he contributes to the same common pool. All contributions of both players of this game will be added up in the common pool, which will be factored by 1.6 and then split evenly among you and the other person. The game is then over.

Each player gets the same share from this game. Concurrently to your earnings from the common pool, you will also receive the units you chose not to contribute. Your remuneration will depend on the final common goods pool in the following way:

10 ECU – (your contribution to the common pool) + 1.6 * (sum of all contributions) / 2

For instance, if player 1 decides to contribute 8 ECU and player 2 contributes 7 ECU, the pool will comprise of 8 ECU + 7 ECU = 15 ECU multiplied by 1.6 = 24 ECU. Each player will receive 1/2 of the common goods pool thus 24 ECU/2=12 ECU. The individual player receives 12 ECU, which equals to 12 ECU/2 = 6 USD plus the amount not contributed to the pool from the initial 10 ECU.

Please make allocation choice

Please report outcome of game 2

Ranking task 1:

Please rank all the following public policy initiatives by importance. Importance is the willingness to contribute to this cause. Place the in your opinion most important public policy initiative on top followed by the next, a bit less important public policy initiative and so on. On the bottom should be the – in your opinion – least important public policy initiative.

Addiction recovery
Anti-crime initiatives
Child health care
Child support
Consumer protection food control
Cultural heritage conservation for future generations
Culture, arts and sports entertainment
Disability integration
Economic market stimulus
Extracurricular youth education
First-aid medical emergency assistance
Foreign aid
Foreign aid child health support
Future basic research and development
Future global governance contribution
Future international development goals contribution
Future international public private partnership set-up
Future space exploration
Immediate public transportation repair
Infrastructure development
International organizations' future goals contribution
Long-term foreign aid remittances
Long-term monetary policy
Long-term public foreign debt reduction
Low-income support
Micro-credit for poverty reduction
Minority empowerment
Refugee youth protection
Retirement benefits
Social equality enhancing education reform
Unemployment payment
Youth entertainment

Ranking task 2:

Please rank again all the following public policy initiatives by importance. Importance is the willingness to contribute to this cause. Place the in your opinion most important public policy initiative on top followed by the next, a bit less important public policy initiative and so on. On the bottom should be the – in your opinion – least important public policy initiative.

Access to clean, safe drinking water
Acid rain reduction
Air quality improvement and noise control
Avert natural resources lock-ins for next generation
Child environmental health and safety risks protection
Clean energy for next generation
Climate change aversion for a sustainable mankind
Conservation of natural resources for next generation
Current toxic substances, chemicals and pesticides control
Ecosystem protection for future generations
Emissions outsourcing
Endangered species, wildlife and marine offspring protection
Environmental justice relief of environmental protection burden for minority and low-income population
Foreign natural disaster recovery
Green products
Green recreational areas cleaning
Habitat conservation by waste management
Immediate energy supply
Intergenerational equity ensured by future environmental global governance
International agreement on nuclear waste long-term storage
Invest in clean automotive technology enhancement
Long-term forecasts of pollution impact on the ecosystem
Long-term ozone layer protection
Long-term sustainable energy supply
Long-term toxic chemicals and hazardous substances export
Nuclear storage maintenance
Oil spill emergency cleanup
Rain forest protection
Reduce next generation’s environmental protection burden
Secure energy supply by fossil fuels imports
Socially responsible investment in alternative energy
Sustainable infrastructure development

1. Please indicate your **trust**.

		Absolutely not	**Not**	**Rather not**	**Neutral**	**Much**	**Very much**	**Absolutely**
1.1	In general I trust.	- - -	- -	-	~	+	+ +	+ + +
1.2	I trust in the game played.	- - -	- -	-	~	+	+ +	+ + +
1.3	I trust the person with whom I played.	- - -	- -	-	~	+	+ +	+ + +
1.4	I trust I reach goals by my own personal effort.	- - -	- -	-	~	+	+ +	+ + +
1.5	My life depends on others.	- - -	- -	-	~	+	+ +	+ + +
1.6	Fate determines my life.	- - -	- -	-	~	+	+ +	+ + +

Demographics

Gender

male	
female	

Age

Highest education

High school	
Bachelor	
Master	
Doctor	
Professor	

Number of family members

alive	
met	

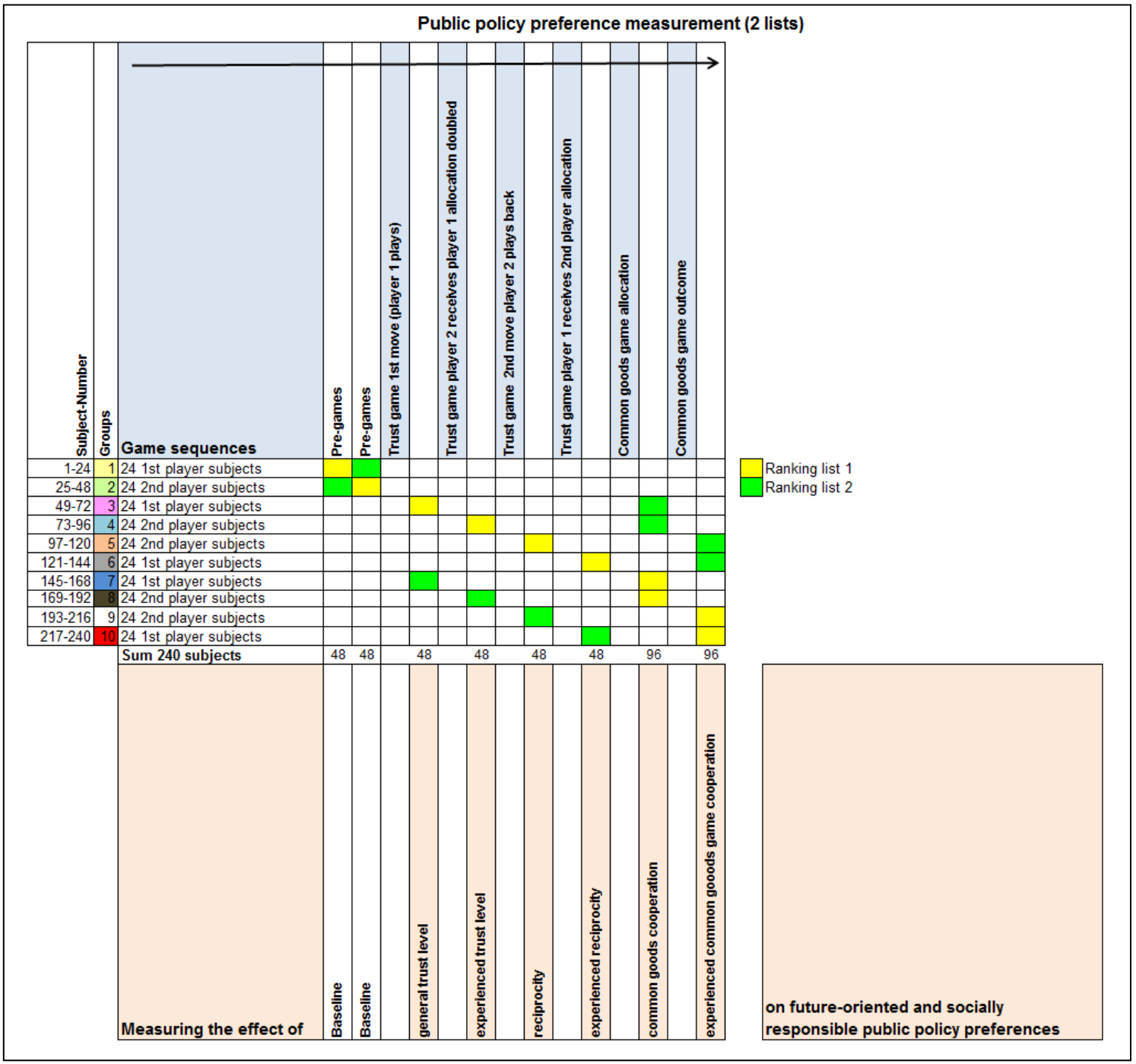
Family

Single	
Partner	
Married	
Divorced/Separated	
If you have children, how many?	
Other……..	

Employment

Academia/Teaching	
Business	
Communication/Media	
Politics/Public Service	
If student, what field?.....	
Other.....	

Thank you for your participation!


Public policy preference measurement (2 lists)
Subject-Number
Groups
Game sequences
Pre-games
Pre-games
Trust game 1st move (player 1 plays)
Trust game player 2 receives player 1 allocation doubled
Trust game 2nd move player 2 plays back
Trust game player 1 receives 2nd player allocation
Common goods game allocation
Common goods game outcome
1-24 1 24 1st player subjects
25-48 2 24 2nd player subjects
49-72 3 24 1st player subjects
73-96 4 24 2nd player subjects
97-120 5 24 2nd player subjects
121-144 6 24 1st player subjects
145-168 7 24 1st player subjects
169-192 8 24 2nd player subjects
193-216 9 24 2nd player subjects
217-240 10 24 1st player subjects
Sum 240 subjects
48 48 48 48 48 48 96 96
Ranking list 1
Ranking list 2
Measuring the effect of
Baseline
Baseline
general trust level
experienced trust level
reciprocity
experienced reciprocity
common goods cooperation
experienced common gooods game cooperation
on future-oriented and socially responsible public policy preferences